

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Canceled).

Claim 3 (Canceled).

Claim 4 (Currently Amended) A method of manufacturing a gas barrier film having polypropylene as a base film, said method comprising: ~~the steps of;~~

a. activating carbon atoms of a surface of said polypropylene film by subjecting said polypropylene film to a an argon plasma treatment, subsequently exposing the activated carbon atoms ~~being subsequently exposed~~ to air atmosphere to allow the activated carbon atoms to be bonded with oxygen, thereby introducing oxygen functional groups into the surface of said polypropylene film; then

b. ~~allowing a reacting a silane agent~~ coupling reaction to take place between with the oxygen functional group of said polypropylene film ~~and a silane coupling agent~~, thereby bonding tuning molecular chains having, as a main skeleton, an -O-Si-O- structure, to carbon atoms of the surface of said polypropylene film through said oxygen functional group (-O-); and

c. ~~allowing a plasma polymerizing the resulting product polymerization between Si and O~~ in a plasma atmosphere containing with an organic silane compound and oxygen, thereby forming an a SiO_x thin film on the surface of said polypropylene film having said tuning molecular chains bonded therein.

Claim 5 (Canceled).

Claim 6 (Original) The method according to claim 4, wherein said oxygen functional groups are introduced into carbon atoms of the polypropylene film in the form of C-O and/or C=O.

Claim 7 (Original) The method according to claim 4, wherein an introduction ratio of said oxygen functional groups to the polypropylene film is in the range of 0.05 to 0.20 as measured based on an atomic ratio between the total number of carbon atoms constituting the surface of the polypropylene film and the number of oxygen atoms, each partially bonded to a carbon atom (i.e. Q_O/Q_C ; wherein Q_C represents the total number of carbon atoms constituting the surface of the polypropylene film, and Q_O is the number of oxygen functional groups, each partially bonded to a carbon atom).

Claim 8 (Original) The method according to claim 4, wherein said silane coupling agent is an organic silane compound represented by a general formula of: $-(R^1O)_n-Si-R^2_{(4-n)}$ (wherein R^1 and R^2 individually represents alkyl group having 1 to 4 carbon atoms).

Claim 9 (Original) The method according to claim 8, wherein said coupling reaction is performed by a process wherein the polypropylene film having said oxygen functional group introduced therein is immersed in an alcohol solution of the silane coupling agent, and then, heated the film coated with the alcohol solution.

Claim 10 (Original) The method according to claim 9, wherein a concentration of said silane coupling agent in the alcohol solution thereof is in the range of 0.1 to 10% by weight.

Claim 11 (Original) The method according to claim 9, wherein said polypropylene film coated with the alcohol solution is heated at a temperature of 50 to 80°C.

Claim 12 (Canceled).

Claim 13 (Currently Amended) The method according to claim 4 ~~or 12~~, wherein said organic silane compound and oxygen are employed by mixing them at a molar ratio ~~of~~ of organic silane compound:oxygen = 3:7 - 5:5.

Claim 14 (New) The method according to claim 4, wherein the thickness of the polypropylene base film is 10 to 50 μ m.

Claim 15 (New) The method according to claim 4, wherein the thickness of the SiO_x thin film is 100 nm or more.

Claim 16 (New) The method according to claim 4, wherein the polypropylene base film is a non-oriented film.

Claim 17 (New) The method according to claim 4, wherein the polypropylene base film is a uniaxially oriented film.

Claim 18 (New) The method according to claim 4, wherein the polypropylene base film is a bi-axially oriented film.

Claim 19 (New) The method according to claim 4, wherein the silane coupling agent is tetramethoxysilane.

Claim 20 (New) The method according to claim 4, wherein the silane coupling agent is tetraethoxysilane.

BASIS FOR THE AMENDMENT

Claims 4 and 13, as well as the specification, have been amended to obviate the Examiner's objections thereto.

Claim 4 further has been amended by incorporating therein the limitation of Claim 5, Claim 5 thus having been canceled, as well as to improve its language

Claim 12 has been canceled as being a duplicate of Claim 8.

Added Claim 14 finds basis at page 6 lines 16-17 of the specification.

Added Claim 15 finds basis at page 8 lines 9-10 of the specification.

Added Claims 16-18 find basis at page 8 lines 24-26 of the specification.

Added Claims 19 and 20 find basis at page 10 line 20 of the specification.